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Boston, City Council, Committee on the
Marginal Railroad.
Report.

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CITY OF BOSTON.



R E P O R T

ON THE SUBJECT OF A

R A I L R O A D T R A C K

ON THE MARGINAL STREETS OF THE CITY.

In Common Council, December 4, 1851.

Ordered, That the Committee on the Marginal Railroad have authority to report in print.

Sent up for concurrence.

FRANCIS BRINLEY, *President.*

In Board of Mayor and Aldermen,

December 8, 1851.

Read and concurred.

JOHN P. BIGELOW, *Mayor.*

CITY OF BOSTON.

In Common Council, October 9, 1851,

Ordered, That Messrs. E. Lincoln, Minot and Calrow, with such as the Mayor and Aldermen may join, be a Committee to consider and report upon the expediency of applying to the Legislature for authority to build a Railroad track on the marginal streets of the City, to connect the several Railroad depots with the various wharves in the City proper, to be used with horse power exclusively for the purpose of saving the transportation of heavy goods across the City—said Committee to have power to employ the City Engineer to make plans, estimates, &c. for the proposed track.

Sent up for concurrence.

FRANCIS BRINLEY, *President.*

The Joint Special Committee appointed by the City Council to consider and report upon the expediency of constructing a Marginal Railroad in the City, to connect the depots of the several railroads with each other, and with the various wharves, have attended to the duty assigned to them, and ask leave to submit the following report:—

R E P O R T .

The short time allowed to the Committee before the close of the present municipal year, has obliged them to compass the subject submitted to them by more summary investigations than they could have desired. Indeed, in approaching the matter, the first thought which presented itself to their minds, and which they believed would most naturally occur to our citizens generally, was that the enterprise seemingly belonged to individuals composing the mercantile community, or to the several railroad corporations, whose interests will be materially subserved by the success of the project in question, rather than to the City itself in its corporate capacity.

But the order passed by the City Council originated with those who believed that they had seen that large expenditures from the City Treasury were annually made and to be made to accommodate the public with new and wider avenues (to be kept always in repair) in those portions of the City where the heavy trade of Boston must pass, the public conveniences for which

trade, a railroad, such as is suggested in the order of the Council, would provide for much more effectually, and when the probable revenue of the same is taken into account, at a lesser cost to the City itself.

The Committee were aware in the outset that several of the large Cities in other States had either tried the experiments of similar railroad facilities within their streets, or had permitted individuals or corporations to provide and make use of them; and they were impressed with the belief that, while by such facilities in those Cities the transportation of goods through their streets was made much easier than by the means employed in our own City, such transportation was very considerably cheapened, and the trade of these Cities thereby largely enhanced. The investigations which have been made have confirmed this preconceived opinion.

The investment of so many millions of the wealth and capital of Massachusetts in the construction of the railroads to the North and West, and to connect with the great lakes, has unquestionably had for one great aim, the making Boston the Capital of Massachusetts, the great receptacle and depot for the immense products of the vast regions through which these railroad routes pass directly, and the more remote regions upon which they may draw; and, when these products are so gathered here, to furnish additional employment for our numerous vessels to distribute them along our coast, or to foreign ports, and reciprocally to receive and transmit to the interior the imported articles which are needed there.

The competition among the several Cities on the Atlantic Coast for this inland trade is now so great and so close, that the time is almost at hand when it may

be said that the difference of a small fraction of a dollar per ton upon the cost of depositing this heavy freight conveniently at deep water, may determine the direction and point upon the seaboard where the great bulk of a valuable trade may tend.

The policy which Boston has entered into so largely must, of necessity, compel her to the alternative of being a smart competitor for this trade, or of sinking a large portion of the capital which has been so profusely invested in the railroads above referred to. In the opinion of the Committee, it should be taken for granted that this trade is to come to us, and that provision must be made for it. In making such provision, by ordinary means, Boston is (comparatively with other Cities) unfavorably situated. In the first place: the original territory of the City proper was circumscribed, and the possible encroachments upon the tidal area in the vicinity of the business streets have *all been made*. In the second place: the streets are narrow. And lastly: the grades of the streets for transportation across the City are too great for heavy loads.

The trade of our City, as it is, furnishes an amount of trucking for heavy goods which, in the course of a single day, will several times clog many of our principal streets, and so entangle the numerous vehicles that happen to be gathered at such times, as to occasion a great waste of time in relieving the temporary difficulty, and great general inconvenience to our citizens in the transaction of their business.

Again: the amount of freight received from and delivered at the several railroad depots daily, brings so many vehicles together at each station, as to delay parties sometimes an hour or more in getting at the goods they are to handle and remove; and where large quan-

tities are to be moved thereto and therefrom, the weight of each load, added to that of the heavy vehicles on which they are moved, makes an amount of five or six tons bearing upon a single pair of wheels, which very soon, in passing over, destroy the road surface of the business streets, especially in all those places where local repairs have been made necessary in arranging for gas, water, or drainage.

The increase of the difficulties above enumerated consequent upon the increase of trade to our City, will demand a remedy.

The clogging of the streets by vehicles in business hours can only be relieved by the widening of such streets; and the value of land is so great in places where this clogging occurs, as to make it almost impracticable to effect such widening. A table, exhibiting the entire expenditure for widening streets since the adoption of the City Charter, is given in the Appendix, marked B.

The increased passage of heavy vehicles over our streets, will cause more frequent repairs to be made in the paving, and enlarge an expenditure for that purpose, which now as will be seen by a table given in the Appendix, marked C, makes a very considerable portion of the tax assessed each year.

The Committee are of opinion that a large proportion of the amount of money which it will be found necessary to appropriate hereafter from year to year for the widening and repairing of the business streets, may be saved by the construction of the railroad contemplated in the order under which they have acted. So large a proportion in their judgment as to make it expedient for the Corporation to take the initiative in the enterprize; while beyond this saying, a very considera-

ble income may be derived from the use of the track, and at the same time the cost of transporting goods across the City and to the various wharves and the damage of the goods in handling, will be much less than it is under the present modes of transportation.

The advantages to the business community beyond those to the Corporation, above suggested, taking the experience of the cities of New York and Philadelphia and Baltimore, will, it is believed be very great. In the City of Baltimore where from 500 to 600,000 barrels of flour are received per annum, and passed through the streets to the stores of the various dealers—the street tracks are very highly valued. The delivery of this great amount of heavy freight is effected with the greatest ease, the distribution is made by a very few men, and the necessity of building large depots at the terminus in the City, of the Baltimore and Ohio Railroad, is superseded, the cars themselves serving as depots until the flour is landed at the stores of consignees. In the opinion of leading merchants, the removal of these tracks, would not only embarrass the distribution of freight within the City, but in all probability would have the effect to close up a number of flour mills, by increasing the cost of each barrel of flour at the shipping point, so much as to enable dealers in other places to undersell the manufacturers in these mills. The main tracks in the City of Baltimore are owned by the Railroad Company, and the lateral tracks are laid down by individuals at their own expense. The Company keep no separate account for the City tracks and therefore the amount of revenue from their use could not be ascertained. It is estimated that there are within the City some $3\frac{1}{2}$ miles of public track and $1\frac{1}{2}$ miles of private track.

In the City of Philadelphia there are some $3\frac{1}{2}$ miles of Railroad track in the business streets of the City which are owned by the Municipal Corporation, and from which it derives a considerable revenue. The cost of this track, owing to the defective manner in which it was first laid down, and the extensive repairs required upon it could not be ascertained, but the receipts for tolls were estimated at \$12,000 per annum, and this amount of revenue was collected under the rates of toll established by the State of Pennsylvania, which for heavy freight, such as flour and other produce, are only about 3 mills per mile for 1000 pounds.

In the City of New York, the Railroad tracks which are already laid down are mostly used for the convenience of passengers, and other tracks are to be laid down in the 6th and 8th Avenues in order to relieve the great travel in Broadway.

It should be admitted here that in the cities above referred to, some objections are raised against the tracks as they now exist, on account of their interference with the easy movement of the ordinary vehicles which must pass through and across the streets where such tracks are laid. But these objections were founded invariably, in the judgment of the Committee, on the defective plans adopted in the laying down of the tracks, the ruts on the side of the rails for the flanges of the car wheels to run in, being so deep in most instances as to tear off the tires of cart wheels when they settle into these ruts, in some cases, and break the axles in attempting to cross the tracks at an angle less than at a right angle.

By recent improvements however in the manufacture of rails, for city use peculiarly, these difficulties have been entirely obviated, and a track can now be constructed which while it is more durable, offers but little

or no obstruction to the easy progress of ordinary vehicles in streets where such tracks are laid.

The Committee have desired the City Engineer to make a survey and plan for the Marginal Railroad described in the order of the City Council, and his report is herewith presented, embracing a description and plan of the route, with the cost of laying down the track and some statistics in regard to the amount of freight which would be likely to pass over such a road, and the probable revenue to be derived from the use of the same.

The cost of the road is estimated at 125,000, and this sum it is believed will cover every possible expenditure for the same. The income from transporting over such a road only one-eighth of the gross amount of freight brought over the several railroads each year, at one quarter of the present average rates of charge is stated at \$15,000 per annum, and this amount it is believed may be greatly increased from year to year.

The route proposed and laid down upon the plan is more favorable for the business section of the City, than the tracks in either the cities herein above enumerated, and the main track is very conveniently located, for entering private tracks thereon from all the principal wharves in the City. These private tracks would unquestionably be constructed in the event of laying down the main rails by the City.

The general considerations herein above recited should in the opinion of the Committee induce the City Council to apply to the State Legislature about to assemble, for authority to locate and construct a connecting Railroad within the City proper for the several depots and wharves, and as it is impossible for the present

City Government to do any thing in the premises, they would recommend the whole subject to the early attention and action of the next City Council.

All which is respectfully submitted.

BILLINGS BRIGGS,
H. M. HOLBROOK,
EZRA LINCOLN,
A. T. MINOT,
WM. H. CALROW, } *Committee.*

*To the Committee of the City Council having in charge
the subject of constructing a Marginal Railroad in the
City of Boston.*

GENTLEMEN :—

In conformity with your instructions of November last, I have devoted as much time to the subject of the proposed Marginal Railway and connections, as my other engagements for the City would permit, but not so much as its importance really merits.

As no practical experience relative to the working of such a system could be obtained in our own City, I availed myself of a recent opportunity to examine the tracks laid down in New York, Philadelphia and Baltimore, while visiting those Cities, on business for the Water Works. The tracks in Philadelphia and Baltimore, in consequence of the manner in which they have been constructed and maintained, are serious obstructions to the safe and convenient use of the streets through which they pass. The rails in those Cities are elevated from two to four inches above the general level of the pavements, and cause the wheels of trucks and carriages to slide along them, instead of crossing them, unless they strike nearly at right angles. The consequence is that inconvenience is not only frequently felt, but actual damage in the breaking of axles sometimes occurs. For this reason, to say nothing of strong conflicting interests, it is not surprising that great opposition was made to the tracks in Baltimore for about ten years, and strong opposition to them still manifests itself periodically in Philadelphia.

Notwithstanding these objections, however, the business men, and all the holders of property along the lines of the tracks in those Cities, consider that the accommodations which they afford are indispensable. In Baltimore, all oppo-

sition to them has ceased ; and the removal now of a track from a business street, would be considered a calamity. As a striking instance of the entire change of feeling there, when the Baltimore and Ohio Railroad Company obtained permission to lay a track to Locust Point and use locomotives on it, for the accommodation of the Coal trade, the property holders on Pratt street were so fearful that the use of locomotives on the Locust Point branch might lead to building up that part of the City, that they obtained permission for the Company to use locomotives through this street, which is one of the most crowded thoroughfares in Baltimore.

In New York the tracks are much better than they are in Philadelphia and Baltimore, and in the lower part of the City are not used for freight. Near the Park there is a piece of track, apparently perfect, which does away with the objections against railways in the streets of a City, so far as it relates to the use of the streets by other vehicles than cars. It consists of a heavy grooved rail, laid on a bed of concrete, with the surfaces of the rails even with the pavement, which is of the most substantial kind, commonly called Russ.

In order to ascertain whether it would be practicable to lay down and use a track connecting all the Railroads that terminate in the City proper, a survey has been made between the Worcester and the Lowell Railroads, passing through Kneeland, Sea, Broad, Commercial and Causeway streets; and a plan of this survey is herewith presented. It seems that very favorable grades may be obtained the whole way, without altering or leaving the streets, except at the foot of Fort Hill. There the grades are no steeper than they are in some parts of Baltimore, where tracks are constantly used; but it would be very desirable to cut them down, or avoid them. The latter may be done by passing through one of the warehouses on India wharf, and doing similar damage to property on Rowe's wharf, and a little south, as shown on the plan.

The Providence Railroad can easily be connected with the Worcester, as a track for that purpose was formerly

commenced at the crossing of the two roads, but never completed.

The Eastern Railroad, it is understood, is to be united, by means of the Grand Junction Railroad, with the Boston terminus of the Maine Railroad. Thus, all the Railroads terminating in Boston may be united by means of the Marginal Railway.

With regard to curvatures, there are none greater than those found in the Cities already mentioned, where curves of 60 and 80 feet radius are quite common. Without very great additional expense, the main track might be so constructed as to admit of the use of locomotives, if it should ever be thought advisable. The extreme narrowness of portions of the streets passed through, but 23 to 25 feet, between the edge-stones in some instances, and the number of vehicles, passing through them, would render it impracticable to lay two tracks all the way. Mr. Parker, whose knowledge of our own City, as well as his experience as Superintendent of the Baltimore and Ohio Railroad, qualifies him to be a competent judge, thinks it would not be well to attempt to lay two tracks in any of our streets, and that one might be made to answer the purpose, if a sufficient number of side-tracks and branches were provided.

If other streets of suitable width and grades, and not too much crowded already with trucks and carriages, could be found, a second track might be laid in them. To a certain extent these conditions exist, and a very good line for a second or return track might be found between Causeway and Commercial streets, by passing from the former through Canal, Blackstone and Clinton streets, to the latter. At this point, Commercial street is very much thronged by market wagons, and even one track used during the busy hours of the day would, no doubt, be an inconvenience; but if, as in other Cities, the cars could be moved to and from the main depots between the hours of two and eight in the morning, two tracks could be accommodated very well in this part of the street, as far as the Custom House. There, one of the

tracks might pass up State street to Broad street, and along Broad street till it unites with the other, which might pass along India street, through the block of warehouses on India wharf, and also through those on Rowe's wharf, as before mentioned. In this way, a double track might be obtained for three-fourths of the distance between the Worcester and the Lowell depots.

In estimating the probable cost of a Railway track between the depots mentioned, some particular plan of forming it should be adopted; but, as several plans might be adopted, either of which would be free from the objections against those in use in Philadelphia and Baltimore, in the following estimate, \$15,000 per mile will be assumed as sufficient.

If the system should be adopted, still further examinations and inquiries ought to be made before determining what particular kind of track should be laid down. The sum of \$15,000 per mile has been assumed, in consequence of its being deemed sufficient by Mr. Latrobe, the Chief Engineer of the Baltimore and Ohio Railroad, who has had much experience with regard to different kinds of tracks, in the City as well as the Country.

Such a track as is ordinarily laid upon New England roads costs at present about \$6,500 per mile, including ballasting. For each short-turn, if Stimson's patent be used, a certain sum would have to be paid for the patent right, depending upon what kind of a bargain could be made with the patentee. Other modes of getting around short turns have been adopted in Philadelphia, to a considerable extent, and are thought by some to be equally as good as Stimson's; but this is not the universal opinion of those who have had an opportunity of judging.

Side-tracks, or turn-outs, will be necessary quite often, especially if but one main track should be laid down. If the system itself should ever be carried out, no doubt there will be numerous branches down the wharves, and some of

these might be used as turn-outs. Still, it is thought best to make some allowance for turn-outs in the estimate, as the branches would probably be private property.

With regard to the probable amount of damages that would be done to buildings on each side of Broad street, by cutting down the grade of this street at the foot of Fort Hill; or, what would be the cost of avoiding the street altogether there, and passing through private property to the East, and across the heads of the wharves, of course any estimate must be based very much upon conjecture.

With the foregoing explanations, the following is offered as an estimate of the probable cost of a track, with sufficient turn-outs, &c., between the Worcester and Lowell depots.

2.42 miles of track,	at \$15,000,	-	-	\$36,300
0.50 " " side tracks,	at \$20,000,	-	-	10,000
8 short turns, including pat. right,		-	-	3,200
Damages to property, by cutting through it, or altering grades of street,		-	-	55,000
				<hr/>
				\$104,500
One mile of track, from Causeway street, through Canal, Blackstone, Clinton, Commercial and Broad streets, to the end of Rowe's wharf, with necessary side-tracks and short-turns, could be laid for		-	-	\$20,500
				<hr/>
				\$125,000

As the proposed second track might be used for empty or light loaded cars, no allowance is made in the estimate for altering grades of streets to accommodate it.

The amount allowed in the estimate for land damages should not be considered as entirely absorbed in the cost of the Marginal Railway, as the track might be arched over, and thus nearly, if not quite, one half the value of the land be saved for storage purposes.

If the track should be laid down, what would there be for the road to do after it was made? In order to answer this question, I have employed an assistant to obtain statistical information from the different Companies, relative to the amount of their business, and the usual direction it took in getting to or going from their depots. In consequence, however, of the pressing engagements of the officers of the several Companies—this being the season when they are required by law to prepare their Annual Reports to the Legislature—it has been impossible, notwithstanding repeated attempts, to collect such information as should be obtained, in order to show the probable amount of freight that would be transported over this road. The accompanying tabular statement (see Appendix A.) exhibits the gross amount of freight transported over the different Railways that terminate in Boston, for the years 1846, 1847, 1848, 1849, 1850, and 1851. An inspection of this statement will show that while the business of some of the roads is not so great as formerly, the aggregate for all the roads has steadily increased from year to year, except from 1848 to 1849, when it remained about stationary.* How much of this gross amount would be transported upon the proposed track, it is impossible to tell from any information now in my possession. The officers of the different roads, who are most likely to have reliable information on this subject, are generally unwilling to offer even a conjecture with regard to it, while none express great confidence in the accuracy of their estimates. It seems probable that the proportion of the gross amount that would be received from one road, would differ from that received from another.

Of the gross number of tons transported on the different roads terminating in Boston, it is known that an important part never reaches the City, but stops at way-stations. A very large proportion of that which does reach the City is

* The amounts for 1851 were left blank till after this Report was sent to the printer, and have disappointed expectation.

taken to the stores and warehouses of consignees, only a part of which are along the line of the proposed track. A considerable amount is taken to and from vessels, which load and unload near the depots.

The amount of freight transported over the different roads that would be carried over the proposed track would, no doubt, be small at first; but most probably the manner and places of doing business would soon begin to change, and the proportion done upon the Marginal Railway rapidly increase.

In Baltimore and Philadelphia, nearly all the freight business, except that of Coal, reaches the main Railroad depots through forwarding agents, who have their small depots scattered all over those Cities, at least wherever they can be reached by the tracks through the streets. The Railroad Companies themselves have no extensive freight depots like those in Boston, and study to accommodate the forwarding agents all they can. In Philadelphia, I was informed that the agents owned the cars themselves, and hauled them, by horse-power, to and from the principal depots.

In Baltimore, the Baltimore and Ohio Railroad Company own the freight cars, and haul them, by horse-power, from the Mount Clare Depot, across the City, at the same rate per mile that is charged upon the main road; but the actual cost through the streets of the City is 10 1-3 cents per ton per mile—eight times as much as the cost per mile on the main stem of that road.

In Philadelphia, the system of doing this kind of business through forwarding agents who own the freight cars has led, it is thought by some, to excessive charges; and the Pennsylvania Central Railroad Company has determined to break up the system by refusing to haul the cars of the forwarding agents, and by establishing a very large depot in West Philadelphia. The Railroad Company expects to be able to do the business so much less than the forwarding agents can, as to take it from them. These agents have already made arrangements to have a great part of their

business done by the Philadelphia and Baltimore and the Baltimore and Ohio Railroads.

As the grades of the streets through which the tracks pass in Baltimore are much more unfavorable than those along the line of the proposed Marginal Railway, the cost, per ton per mile, of transporting freight through the streets, ought to be less in this City than in that. How far an inequality in the proportion of empty cars might operate here, to prevent the average cost of transportation from being reduced below what it is in Baltimore, it is impossible to tell. The probability is, that with as perfect a track as it is proposed to lay here, the cost per ton per mile of transportation over it would not exceed ten cents, and it ought to fall short. The present cost of transporting merchandise across the City varies with the kind of freight and the trouble of loading and unloading ; but an average of every ton transported from the depots cannot be less than forty cents ; and if the average distance transported on the proposed track should be two miles, a large estimate, each ton would cost twenty cents, or one half the present prices. Should the amount of freight to be transported be but one-eighth the gross amount received on all the Railroads terminating in the City, it would be, according to the official returns for 1850, 150,000 tons. This, at ten cents a ton, would show a saving of \$15,000 per annum in the cost of transportation, or twelve per cent. on the estimated cost of the Marginal Railroad. In order, however, to make the proposed track self-paying, and at the same time be able to offer such inducements in the way of cheap transportation, as to make it an object for merchants and others to patronise it and lay down private branches, it would be necessary to get about one-fourth of the business of all the roads.

If the net revenue should only equal the interest on the outlay, together with a sufficient allowance for depreciation in the value of the materials in the track, there would still be an important gain to the City by the saving in repairs of streets.

There are no means of ascertaining what proportion of the large amounts paid annually, for several years past, for the repairs of streets, has been owing to the frequent passage over them of heavily loaded wagons and trucks; but there is no doubt in the minds of those who have observed their influence, that they render necessary no inconsiderable part of these repairs.

If a series of observations, extending through several months, could be made on the amount and kinds of freight taken to and from each depot, with its direction across the City, it would establish a much more satisfactory basis than any now possessed for estimating the probable amount of revenue that might be derived from the Marginal Railway, and the probable saving in the repairs of streets.

Which is respectfully submitted,

E. S. CHESBROUGH,

City Engineer.

Boston, Dec. 31, 1851.

APPENDIX A.

STATEMENT showing Tonnage upon different Railways terminating in Boston, for 1846, '47, '48, '49, '50, '51, as reported to the Legislature by the several Companies.

Names of Roads.	Length.	Branches.	No. Tons carried.	No. carried 1 mile.	No. carried to and from other Roads.
1846.					
Boston and Lowell, -	25 3-4	1 3-4	222,831	5,626,777	2,878,226
" " Maine, -	73	9 2-3	61,600	-	-
" " Providence, -	41	2 1-5	82,192	1,962,789	595,128
" " Worcester, -	44 5-8	8 1-2	179,325	6,941,291	5,171,664
Eastern, -	38 1-5	3	38,013	1,090,442	-
Fitchburg, -	49 1-3	2	201,800	3,351,310	5,421
Old Colony, -	37	-	16,197	299,394	-
1847.					
Boston and Lowell, -	-	-	801,958	19,272,003	-
" " Maine, -	-	-	281,441	7,117,656	3,903,402
" " Providence, -	-	-	120,428	3,612,840	-
" " Worcester, -	6.6	6.6	87,605	1,937,027	780,942
Eastern, -	-	14	283,718	10,755,799	8,298,327
Fitchburg, -	-	20	41,047	1,165,873	331,444
Old Colony, -	-	-	244,476	5,198,497	453,066
	-	7	42,707	748,550	219,670
1848.					
Boston and Lowell, -	-	-	1,101,422	30,536,242	13,916,851
" " Maine, -	-	-	304,270	7,809,126	4,632,394
" " Providence, -	-	5.8	116,694	3,752,445	-
" " Worcester, -	-	-	87,611	1,706,426	709,370
Eastern, -	-	22	273,146	10,195,309	7,109,038
Fitchburg, -	-	-	45,262	1,220,841	299,400
Old Colony, -	-	6 3-4	266,868	6,743,089	2,957,560
	-	7 3-4	73,200	1,181,153	392,051
	-	-	1,167,051	32,608,339	16,099,813

Year	Location	8	3-4	12	23.9	15	Use 5 1/2 miles of Providence and Worcester Railroad
1849.	Boston and Lowell,	-	-	-	-	-	4,272,528
	" " Maine,	-	8	3-4	-	-	7,168,538
	" " Providence,	-	12	-	-	-	3,547,817
	" " Worcester,	-	-	23.9	-	-	2,092,542
	Eastern,	-	-	-	-	-	9,461,055
	Fitchburg,	-	-	-	-	-	341,442
	Old Colony,	-	-	-	-	-	1,723,049
		-	-	-	-	-	6,385,807
		-	-	-	-	-	4,677,303
		-	-	-	-	-	406,112
	-	-	-	-	-	17,427,539	
1850.	Boston and Lowell,	-	-	-	-	-	3,201,718
	" " Maine,	-	-	-	-	-	683,691†
	" " Providence,	-	-	-	-	-	959,491
	" " Worcester,	-	-	-	-	-	7,214,698
	Eastern,	-	-	-	-	-	227,019
	Fitchburg,	-	-	-	-	-	4,904,002
	Old Colony,	-	-	-	-	-	546,135
		-	-	-	-	-	17,736,754
		-	-	-	-	-	3,845,375
		-	-	-	-	-	1,031,840
1851.	Boston and Lowell,	-	-	-	-	-	3,845,375
	" " Maine,	-	-	-	-	-	1,031,840
	" " Providence,	-	-	-	-	-	1,088,499
	" " Worcester,	-	-	-	-	-	6,419,585
	Eastern,	-	-	-	-	-	277,672
	Fitchburg,	-	-	-	-	-	4,938,336
	Old Colony,	-	-	-	-	-	581,467
		-	-	-	-	-	17,672,654
		-	-	-	-	-	6,140,947
		-	-	-	-	-	4,632,473
	-	-	-	-	-	2,554,170	
	-	-	-	-	-	9,061,119	
	-	-	-	-	-	1,468,484	
	-	-	-	-	-	7,345,035	
	-	-	-	-	-	1,352,910	
	-	-	-	-	-	32,545,138	

* Probably reduced by Manchester and Lawrence, of which no returns are made to the Legislature. † First year this item was returned.

RECAPITULATION.

Totals for the year 1846,	801,958	19,372,003	18,916,851
" " " 1847,	1,101,422	30,636,242	16,099,813
" " " 1848,	1,167,051	32,608,339	17,427,539
" " " 1849,	1,167,129	31,765,907	17,736,754
" " " 1850,	1,219,312	33,596,989	17,736,754
" " " 1851,	1,234,284	32,545,138	17,672,654

The Boston and Providence, and the Fitchburg, are for 11 months only.

APPENDIX B.

Statement of Amounts Expended by the City for
LAYING OUT AND WIDENING STREETS,
from 1st June, 1822, to 30th, April, 1851.

Ann, - - -	64,804	66	<i>Brought forward,</i>	\$425,338	12
Atkinson, - -	7,038	75	Court, - -	84,524	68
A (South Boston,) -	5,626	15	Chambers and Leverett, -	851	75
Ann and Blackstone,	5,000	00	Charter, - -	747	00
Alden Lane, -	167	25	Commercial, -	118,143	87
Ash, - - -	778	74	Congress, - -	6,179	43
Allen and South Allen, -	616	25	Castle, - -	3,518	00
Blackstone, -	93,318	08	Devonshire, -	17,001	34
Bromfield, - -	76,985	39	Derne, - -	5,889	46
Boylston, - -	9,921	87	Derne and Temple,	391	03
Beverly - - -	14,627	13	Dock Square, -	7,491	87
Barrett, - - -	1,068	24	Doane, - - -	5,131	75
Beach, - - -	11,941	06	Deacon, - - -	7,190	78
Bedford, - - -	3,366	00	Dover, - - -	2,000	00
Brattle, - - -	9,353	60	Distil House Square,	633	19
Bowdoin, - - -	1,089	56	Essex, - - -	11,501	04
Broad. <i>See Sea and</i>			Essex and Lincoln,	3,000	00
<i>Broad.</i>			Elm, - - -	15,005	79
Belknap, - - -	500	00	Friend, - - -	31,083	42
Blossom, - - -	4,315	57	Federal, - - -	45,914	51
Beacon, - - -	8,451	05	Fleet, - - -	58,352	29
Butler's Row, -	1,128	84	First, (<i>South Boston</i>),	10,149	64
Brighton, - - -	250	00	Fourth, do. do.	5,931	83
Court Square, -	17,048	08	Franklin, - - -	5,429	45
Canal, - - -	210	00	Fulton, - - -	22,880	60
Cross, - - -	11,357	60	Green, - - -	9,875	59
Chestnut, - - -	850	00	Garden Court, -	2,371	96
Clinton, - - -	21,898	31	Greenough Lane,	125	00
Clark, - - -	4,971	37	Garden, - - -	548	50
Carver, - - -	732	10	Hanover, - - -	31,858	63
Causeway, - - -	250	92	Harrison Avenue,	31,170	97
Cooper, - - -	8,310	63	Hawkins, - - -	1,896	20
Chardon, - - -	4,953	59	Howard, - - -	1,050	00
Chatham, - - -	1,398	97	High, - - -	5,955	71
Cambridge, - -	33,008	36	Hawes, - - -	250	00
<i>Carried forward,</i>	\$425,338	12	<i>Carried forward,</i>	\$976,378	40



1851.] CITY DOCUMENT.—No. 77.

<i>Brought forward,</i>	\$976,378 40	<i>Brought forward,</i>	\$1,326,802 83
Ivers, - - -	2,000 00	Sea and Broad, -	77,880 91
Kingston, - -	18,366 82	Summer, - - -	34,466 52
Kneeland, - -	993 12	Spring, - - -	2,287 00
Lincoln, - - -	19,296 68	Salem, - - -	18,133 15
Lynn and Charter,	222 75	Staniford, - -	459 85
Lindall, - - -	10,751 00	School, - - -	12,150 34
Lynn, - - -	540 21	Suffolk, - - -	1,106 00
Lynde, - - -	257 00	Somerset, - -	428 01
Leverett, - - -	978 66	Snowhill, - -	5,338 75
Milk, - - -	30,807 10	South, - - -	156 50
Moon, - - -	402 48	Tremont, - - -	117,962 60
Merchants Row,	48,920 78	Tremont Road, -	21,869 41
Methodist Alley,	100 00	Temple, - - -	8,152 72
Mason, - - -	189 74	Thacher, - - -	1,285 00
May - - -	100 00	Union, - - -	35,054 63
McLean, - - -	1,635 58	Unity, - - -	163 75
Mt. Vernon and Olive,	3,048 37	Vine, - - -	175 00
Mill Pond and Salem,	6,667 28	Washington, - -	176,579 68
Merrimac, - - -	450 00	Waltham, - - -	39,617 24
Myrtle, - - -	194 87	West, - - -	2,774 25
North Margin, - -	5,686 63	Water, - - -	892 00
North Bennett, - -	240 66	Winter, - - -	4,672 26
North Market, - -	15,631 60	Various Streets, none	
Northampton, - -	500 00	of which are over	
New Streets, so called,	3,406 59	\$200,	1,412 94
Orange Court, - -	4,535 50		
Oliver, - - -	664 16		1,890,821 84
Prince, - - -	32,343 00	Plans, Surveys, &c.,	7,062 95
Pearl, - - -	10,142 77		
Pearl and Atkinson,			1,897,884 29
passage between,	1,500 00	<i>Deduct, amount</i>	
Pleasant, - - -	246 97	Credited in	
Pinckney, - - -	1,566 08	1839, received	
Portland, - - -	14,820 09	for "contribu-	
Poplar and Allen,	400 00	tions on ac-	7,750 00
Purchase, - - -	3,366 65	count of Wi-	
Pitts, - - -	479 40	dening Vari-	
Richmond, - - -	67,510 81	ous Streets.	
Robinson's Alley, -	477 64		
Sudbury, - - -	40,983 49	Total,	\$1,890,134 29
<i>Carried forward,</i>	\$1,326,802 83		

APPENDIX C.

Cost of Paving Streets in Boston.

Year ending May 1st, 1842, -	-	-	-	-	\$46,923 92
" " " " 1843, -	-	-	-	-	47,763 50
" " " " 1844, -	-	-	-	-	38,591 78
" " " " 1845, -	-	-	-	-	38,738 99
" " " " 1846, -	-	-	-	-	70,285 57
" " " " 1847, -	-	-	-	-	104,870 04
" " " " 1848, -	-	-	-	-	99,776 16
" " " " 1849, -	-	-	-	-	163,576 04
" " " " 1850, -	-	-	-	-	154,953 89
" " " " 1851, -	-	-	-	-	147,895 45
Nine months ending					
Jan. 1st, 1852, -	-	-	-	-	180,000 00

The great increase subsequent to 1846 is owing to the disturbance of old Streets by laying the Cochituate water-pipes, and to paving new ones in South and East Boston.

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